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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,409	09/27/2000	Markus Loose	00SC053US3	6802

7590 01/30/2002
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EXAMINER

KAO, CHIH CHENG G

ART UNIT PAPER NUMBER

2882

DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/671,409

Applicant(s)

LOOSE, MARKUS

Examiner

Chih-Cheng Glen Kao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 6, 7, 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9 and 12-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. Drawn to a photodetector circuit array, classified in class 250, subclass 208.1 as shown in Figures 2a, 2b, and 3
- II. Drawn to a solid-state device for photodetecting, classified in class 257, subclass 292 as shown in Figures 5 and 6

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1 and 8 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Steven Patrick on January 24, 2002, a provisional election was made with traverse to prosecute the invention of I, claims 1-5, 8, 9, and 12-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6, 7, 10, and 11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

RS1 and Sell as exemplified in Page 6, line 24 and 29 respectively with regards to Fig.

2a

Q2 and Q3 are recited on Page 7, line 26

A proposed drawing correction, corrected drawings, or an amendment to the specification is required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "Q2" has been used to designate both a buffer/interface FET as exemplified on Page 6, line 26 and a FET switch as exemplified on Page 7, line 18. A proposed drawing correction, corrected drawings, or an amendment to the specification is required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5, 8, 9, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (US Patent 6,249,618) in view of Wilder et al. (US Patent 5,262,871).

5. Regarding claims 1, 5, 8, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (US Patent 6,249,618) in view of Wilder et al. (US Patent 5,262,871). Hou shows a photodetector array comprising a plurality of pixels (Fig. 3), each pixel comprising at least 2 photodiodes (col. 6, lines 13-26), which may be called subpixels, and a switching circuit to combine photodiodes for different resolutions (Fig. 3). However, Hou does not seem to specifically disclose addressable pixels.

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Wilder et al. teaches addressable pixels for input and readout (Abstract and Figs. 1 and 2).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the addressable pixels of Wilder et al. with the device of Hou, since one would be motivated to have more selectivity to change the resolution as shown by Wilder et al. (Abstract).

6. Regarding claims 13 and 14, Hou in view of Wilder et al. suggests a device as recited above. However, Hou does not seem to specifically disclose an array switchable between 1920, 1080, and 720 rows.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have an array switchable between 1920, 1080, and 720 rows with the suggested device of Hou in view of Wilder et al., since it would have just been a matter of engineering expediency to choose a resolution that was considered high and a resolution that was considered low. Secondly, discovering the optimum or workable range for resolution involves only routine skill in the art. One would be motivated to have a resolution as high as 1920 rows for greater detail in the image, while one would be motivated to have a resolution as low as 720 rows for faster processing.

7. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou in view of Wilder et al. as applied to claim 1 above, and further in view of Orava et al. (US Patent

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5,812,191). Hou in view of Wilder et al. suggests a device as recited above. However, Hou does not seem to specifically disclose FET switches.

Orava et al. teaches FET switches (col. 4, lines 58-67, and col. 5, lines 1-5).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made to have FET switches of Orava et al. with the suggested device of Hou in view of Wilder et al., since FETs are functionally equivalent to the switches of Hou in that they are both switches. One would be motivated to use FETs for to reduce components as shown by Orava et al. (col. 4, lines 58-63).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - Th (8 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gk

January 24, 2002


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800